REMARKS

Claims 1 and 3-10 are pending. Claims 11 and 12 have been canceled. Claims 1, 3-6, and 10 have been amended. No new matter has been introduced. Reexamination and reconsideration of the present application are respectfully requested.

In the September 26, 2006 Office Action, the Examiner rejected claims 1-12 under 35 U.S.C. § 102 (b) as being anticipated by Okamoto, U.S. Patent No. 5,559,298 (hereinafter Okamoto). Applicant respectfully traverses the rejections in view of the claims as amended.

Independent claim 1 recites:

A tone generator system which generates at least one musical tone in response to sounding instruction data relating to a channel by using a program number based on tone color changing instruction data designating a tone color of the channel which is stored in predetermined timing before the sounding instruction data, the tone color changing instruction data including a channel number indicative of the channel and the program number, and the sounding instruction data including the channel number, comprising:

a first waveform storage that stores ***compressed waveform data, each of the stored compressed waveform data being readable based on the program number, the compressed waveform data being compressed in a compression method for compressing waveform data in units of a frame comprised of a plurality of samples encoded with a format selected from the group consisting of MPEG-1 Audio Layer 3 (MP3), MPEG-2, Advanced Audio Coding (AAC), and Adaptive Transform Acoustic Coding (ATRAC);***

a second waveform storage;

a sequencer that sequentially receives and interprets a series of messages included in a musical composition file, supplies the tone color changing instruction data obtained by interpreting the series of messages, and then supplies the sounding instruction data obtained by interpreting the series of messages;

a decoder responsive to the tone color changing instruction data supplied from said sequencer, for reading out from said first waveform storage the compressed waveform data based on the program number included in the supplied tone color changing instruction data, for ***decoding the readout compressed waveform data into waveform data in a pulse code modulation format***, and for storing the decoded waveform data in the pulse code modulation format into said second waveform storage, each of the stored decoded waveform data being readable based on the channel number; and

a tone generator section that is responsive to the sounding instruction data supplied from said sequencer, for reading out from said second waveform storage the

waveform data in the pulse code modulation format, based on the channel number included in the supplied sounding instruction data, and for generating musical tones based on the readout waveform data in the pulse code modulation format.

The present invention as recited in independent claim 1 is directed to a tone generator system in which a series of messages in a musical composition (e.g., musical composition data) are interpreted using a sequencer, thereby automatically implementing performance processing based on the musical composition file. In response to tone color changing instruction data supplied from the sequencer, the decoder decodes compressed waveform data which were compressed using a compression method for compressing waveform data in units of a frame comprised of a plurality of samples encoded with, for example, MP3, AAC, or ATRAC. As a result, the compressed waveform data is decoded in advance before the tone generator section starts musical tone-generating processing in response to sounding instruction data. Therefore, at the time of the automatic performance processing, a delay in sounding a musical tone due to the necessity of decoding the compressed waveform data is avoided, thus making it possible to smoothly generate a musical tone.

In particular, in the case of using a compression method (e.g., MP3, AAC, or ATRAC) that performs data compression in units of a frame comprised of a plurality of samples to thereby realize a high compression rate, while taking much time for decoding compressed waveform data, musical tone-generating processing based on compressed waveform data can be carried out without delay, using a decoder that decodes compression waveform data in response to tone color changing instruction data supplied in advance to the decoder before the tone generator section starts musical tone-generating processing in response to the sounding instruction data.

The Okamoto reference does not disclose, teach or suggest the tone generator system specified in independent claim 1. Unlike the tone generator system specified in independent claim 1, Okamoto does not teach "a first waveform storage that stores ***compressed waveform data, each of the stored compressed waveform data being readable based on the program number, the compressed waveform data being compressed in a compression method for compressing waveform data in units of a frame comprised of a plurality of samples encoded with a format selected from the group consisting of MPEG-1 Audio Layer 3 (MP3), MPEG-2, Advanced Audio Coding (AAC), and Adaptive Transform Acoustic Coding (ATRAC).***"

Okamoto is directed to an electronic musical instruments that employs waveform interpolation to produce naturally sounding synthesized musical tones. *(Okamoto, Col. 1, lines 8-10)* Okamoto discloses a CPU 11 of the electronic musical instrument which fetches a key-ON or key-OFF signal from a keyboard 14, and acquires a key number and touch data for a key where an event has occurred. Based on these data, the CPU 11 transmits a tone generation parameter read from a program ROM 12 to a tone generation system 17, thereby producing a musical tone. *(Okamoto, Col. 4, lines 7-16)*

In waveform interpolation processing, waveform data are read from a waveform ROM 20 in accordance with musical instrument data selected by panel switches and timbre data corresponding to the current tone generation time (step S1). Interpolation interval data corresponding to a timbre are read from an interpolation interval ROM 21 (step S2). Thereafter, interpolation is performed on the read-out timbre waveforms by employing the interpolation interval data and tone generation time data (step S3). *(Okamoto, FIG. 6 and Col. 5, line 65 – Col. 6, line 12)*

However, the system specified in independent claim 1, as amended is distinct from the disclosure of Okamoto because Okamoto fails to disclose "a first waveform storage that stores ***compressed waveform data, each of the stored compressed waveform data being readable based on the program number, the compressed waveform data being compressed in a compression method for compressing waveform data in units of a frame comprised of a plurality of samples encoded with a format selected from the group consisting of MPEG-1 Audio Layer 3 (MP3), MPEG-2, Advanced Audio Coding (AAC), and Adaptive Transform Acoustic Coding (ATRAC).***"

In addition, unlike the tone generator system specified in independent claim 1, Okamoto does not teach "***a decoder responsive to the tone color changing instruction data supplied from said sequencer, for reading out*** from said first waveform storage the compressed waveform data based on the program number included in the supplied tone color changing instruction data, for ***decoding the readout compressed waveform data into waveform data in a pulse code modulation format***, and for storing the decoded waveform data in the pulse code modulation format into said second waveform storage, each of the stored decoded waveform data being readable based on the channel number."

Instead, Okamoto discloses that the electronic musical instrument generates a musical tone using interpolated waveform data in response to a key-ON signal generated in response to a manual operation of keyboard 14 which is not the same as "***a decoder responsive to the tone color changing instruction data supplied from said sequencer, for reading out*** from said first waveform storage the compressed waveform data based on the program number included in the supplied tone color changing instruction data, for ***decoding the readout compressed waveform data into waveform data in a pulse code***

modulation format, and for storing the decoded waveform data in the pulse code modulation format into said second waveform storage, each of the stored decoded waveform data being readable based on the channel number." Accordingly, Applicant respectfully submits that independent claim 1, distinguishes over Okamoto.

Independent claims 5 and 6 recite limitations similar to those in independent claim 1, as amended. Accordingly, Applicant respectfully submits that independent claims 5 and 6 distinguish over Okamoto for reasons similar to those set forth above with respect to independent claim 1, as amended.

Claims 3-4, 7-8, and 9-10 depend from independent claims 1, 5, and 6, respectively. Accordingly, Applicant respectfully submits that claims 3-4, 7-8, and 9-10 distinguish over Okamoto for the same reasons set forth above with respect to independent claims 1, 5, and 6, respectively.

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Applicant believes that the claims are in condition for allowance. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference call would advance prosecution of the application.

Respectfully submitted,

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Date: December 19, 2006

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